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EXAMINER

RASHID, DAVID

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/724,521	Applicant(s) WARNOCK ET AL.	
	Examiner DAVID P. RASHID	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

[1] All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Continued Examination Under 37 CFR 1.114

[2] A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 23, 2008 has been entered.

Amendments & Interview

[3] This office action is responsive to the claim amendment received on April 23, 2008 and the telephone interview on March 5, 2008. Claims 1-32 remain pending.

Claim Rejections - 35 USC § 102

[4] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[5] **Claims 1-6, 8, 10-16, 17-22, 24, and 26-32** are rejected under 35 U.S.C. 102(e) as being anticipated by *Seeger et al.*¹

Regarding **claim 1**, *Seeger et al.* discloses a method (fig. 1) of analyzing an image (fig. 1, item 110) including text (the text in fig. 2) to allow display (fig. 1, item 151) of said image and selection of text (fig. 1, item 152) included within said image, the method comprising:

mapping (fig. 1, item 150) an image to determine user defined regions (the region between item 1110 and item 1120 of blackened text in fig. 11; multiple regions may exist in the image) of said image that contain text (the text in fig. 2) by extracting quads (the boxes in fig. 4, fig. 11; fig. 5, item 520) from said image and assigning said quads to said regions;

wherein each said quad (the boxes in fig. 4, fig. 11; fig. 5, item 520) comprises a bounding rectangle that defines the location of pixels in said image that corresponds to an individual word (each bounded rectangle quad in fig. 4 corresponds to an individual word) in said image;

presenting said image (fig. 1, item 151) to a user;

said user selecting said regions (fig. 1, item 152; *e.g.*, the region between item 1110 and item 1120 of blackened text in fig. 11) within said image that contain text; and

analyzing portions of the image which correspond to said regions which contain user selected text to develop a desired ordering (fig. 1, items 140, 160; the ordering is performed in fig. 8, fig. 9, fig. 11) of said individual words in the selected regions in accordance with a textual relationship (the textual relationship in that the words are adjacent) between each of the individual words in each of said selected regions and a textual relationship (the selected regions

¹ U.S. Patent No. 6,640,010 (filed Nov. 12, 1999) [hereinafter “Seeger et al.”]

1110 and 1120 create a textual relationship that recognizes quads 1131 to 1140 in fig. 11) between each of the selected regions.

Regarding **claim 2**, *Seeger et al.* discloses the method of claim 1 wherein the image includes a complex textual format (the text in fig. 2 contains a “complex textual format”) having one or more articles of text (“newspaper article” at 5:17-18), such as found in a newspaper or magazine page, and the desired ordering (*e.g.*, items 1110 through 1140 between the first and end point are selected because it is suitable for reading (a desired ordering), fig. 19) is related to the order in which the selected regions are to be presented in a different format (fig. 1, item 170) appropriate for a specific use (the uses in item 180 of fig. 1).

Regarding **claim 3**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the desired ordering (*e.g.*, items 1110 through 1140 between the first and end point are selected because it is suitable for reading (a desired ordering), fig. 19) of the regions (the region between item 1110 and item 1120 of blackened text in fig. 11; multiple regions may exist in the image) includes a preferred order of words in said selected regions (the order of such words is “preferred” if it is being chosen that way).

Regarding **claim 4**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the desired ordering (*e.g.*, items 1110 through 1140 between the first and end point are selected because it is suitable for reading (a desired ordering), fig. 19) of the regions (the region between item 1110 and item 1120 of blackened text in fig. 11; multiple regions may exist in the image) is appropriate for use by a human reader (the desired ordering of the regions is “appropriate for use by a human reader” as in fig. 19).

Regarding **claim 5**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the desired ordering of the regions is appropriate for use in transferring the text over a network (fig. 20, items 2014, 2015).

Regarding **claim 6**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the desired ordering of the regions is appropriate for use in a database (fig. 20, items 2032, 2008, 2010).

Regarding **claim 8**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the desired ordering of the regions is appropriate for use by a word processor (9:38-45).

Regarding **claim 10**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

developing a frameset of frame (*e.g.*, fig. 5, items 510, 530) and sub-frame areas (*e.g.*, fig. 5, item 520) of the image each included related regions of text.

Regarding **claim 11**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

identifying groups of regions of text related to textual articles (the region of text in fig. 19 may be a “newspaper article [that] would be classified as a separate text region” at 5:14-26) and sub-articles (all other articles that are not the main “newspaper article”, *e.g.*, the text in fig. 19).

Regarding **claim 12**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

ordering regions (the text region in fig. 19 is in order) within a textual article (the region of text in fig. 19 may be a “newspaper article [that] would be classified as a separate text region” at 5:14-26).

Regarding **claim 13**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

identifying groups of regions of text (“multiple text selections...” at 8:42-50) related to textual articles (the region of text in fig. 19 may be a “newspaper article [that] would be classified as a separate text region” at 5:14-26); and

ordering regions (the text region in fig. 19 is in order) within textual articles.

Regarding **claim 14**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

normalizing (normalizing is to transform it so that some function of its coordinates or other parameters has a prespecified value; the text in fig. 19 is normalized to that of fig. 2) the textual image (fig. 2).

Regarding **claim 15**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

columnizing (8:42-50) the textual image (fig. 2).

Regarding **claim 16**, *Seeger et al.* discloses the method of claims 1 or 2 wherein the analyzing further comprises:

regionalizing (8:42-50) the textual image (fig. 2).

Regarding **claim 17**, claim 1 recites identical features as in the system (means-plus-language anticipated by fig. 20 (*e.g.*, display item 2012, software/hardware means 2004 and 2002) of claim 17. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 17.

Regarding **claim 18**, claim 2 recites identical features as in the system of claim 18. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 18.

Regarding **claim 19**, claim 3 recites identical features as in the system of claim 19. Thus, references/arguments equivalent to those presented above for claim 3 are equally applicable to claim 19.

Regarding **claim 20**, claim 4 recites identical features as in the system of claim 20. Thus, references/arguments equivalent to those presented above for claim 4 are equally applicable to claim 20.

Regarding **claim 21**, claim 5 recites identical features as in the system of claim 21. Thus, references/arguments equivalent to those presented above for claim 5 are equally applicable to claim 21.

Regarding **claim 22**, claim 6 recites identical features as in the system of claim 22. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 22.

Regarding **claim 24**, claim 8 recites identical features as in the system of claim 24. Thus, references/arguments equivalent to those presented above for claim 8 are equally applicable to claim 24.

Regarding **claim 26**, claim 10 recites identical features as in the system of claim 26. Thus, references/arguments equivalent to those presented above for claim 10 are equally applicable to claim 26.

Regarding **claim 27**, claim 11 recites identical features as in the system of claim 27. Thus, references/arguments equivalent to those presented above for claim 11 are equally applicable to claim 27.

Regarding **claim 28**, claim 12 recites identical features as in the system of claim 28. Thus, references/arguments equivalent to those presented above for claim 12 are equally applicable to claim 28.

Regarding **claim 29**, claim 13 recites identical features as in the system of claim 29. Thus, references/arguments equivalent to those presented above for claim 13 are equally applicable to claim 29.

Regarding **claim 30**, claim 14 recites identical features as in the system of claim 30. Thus, references/arguments equivalent to those presented above for claim 14 are equally applicable to claim 30.

Regarding **claim 31**, claim 15 recites identical features as in the system of claim 31. Thus, references/arguments equivalent to those presented above for claim 15 are equally applicable to claim 31.

Regarding **claim 32**, claim 16 recites identical features as in the system of claim 32. Thus, references/arguments equivalent to those presented above for claim 16 are equally applicable to claim 32.

Claim Rejections - 35 USC § 103

[7] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[8] **Claims 7, 9, 23, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Seeger et al.* in view of *Wang et al.*²

Regarding **claim 7**, while *Seeger et al.* discloses the method of claim 1 or 2, *Seeger et al.* does not teach wherein the desired ordering of the regions is appropriate for use by a search function.

Wang et al. discloses a method for character recognition (fig. 2) that includes wherein the desired ordering of the regions (fig. 2, item S212; 9:65-12:13) is appropriate for use by a search function (function responsible for searching touching regions across page in fig. 17, item S1711; function responsible for searching white space between characters in fig. 21, item S2101).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the desired ordering of the regions of *Seeger et al.* to include being appropriate for use by a search function as taught by *Wang et al.* "...to overcome the foregoing difficulties:", *Wang et al.*, 3:47-48 listed from 1:34-3:44.

Regarding **claim 9**, while *Seeger et al.* discloses the method of claim 1 or 2, *Seeger et al.* does not teach wherein the desired ordering of the regions is appropriate for use by a printer.

Wang et al. discloses a method for character recognition (fig. 2) that includes wherein the desired ordering of the regions (fig. 2, item S212; 9:65-12:13) is appropriate for use by a printer (fig. 1, item 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the desired ordering of the regions of *Seeger et al.* to include being appropriate for

² U.S. Patent No. 5,680,479 (issued Oct. 21, 1997) [hereinafter "*Wang et al.*"]

use by a printer as taught by *Wang et al.* so that it "...can be embodied in a variety of devices where character recognition processing is desired, such as image processing or image reproducing apparatuses...", *Wang et al.*, 6:49-52.

Regarding **claim 23**, claim 7 recites identical features as in the system of claim 23. Thus, references/arguments equivalent to those presented above for claim 7 are equally applicable to claim 23.

Regarding **claim 25**, claim 9 recites identical features as in the system of claim 25. Thus, references/arguments equivalent to those presented above for claim 9 are equally applicable to claim 25.

Response to Arguments

[9] Applicant's arguments filed on April 23, 2008 with respect to claims 1 and 17 have been respectfully and fully considered, but they are not found persuasive.

[10] Summary of Remarks regarding claims 1 and 17:

Applicant argues *Wang et al.* does not teach the notion of extracting quads in the sense that Applicant claims quads. The examples in *Wang et al.* referred to by the Examiner do not teach individual words. The Examiner indicates that *Wang et al.* may include individual words, but *Wang et al.* does not specifically teach an individual word. In particular, with regard to Figure 13 of *Wang et al.*, the only notion of text is that *Wang et al.* seeks, to separate text from non-text. *Wang et al.* does not consider the notion of a quad down to a single word level. In sharp contrast, Applicant's invention creates a quad for each and every single word. Applicant clearly states this in. Applicant's claim where Applicant teaches that "each said quad comprises a bounding rectangle that defines a location of pixels in said image that correspond to an

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individual word". No such teaching is found in *Wang et al.*. (Applicant Resp. at 8, Apr. 23, 2008.)

Further, the Examiner maintains that *Wang et al.* teaches a selection Of regions of text based upon a user ordering: No such teaching is found in *Wang et al.*. *Wang et al.* teaches an automatic system that identifies text and non-text information during an OCR operation. There is no notion in *Wang et al.* that a user may select portions of an image and receive back a display of that portion selected by the user. (Resp. at 8-9.)

Further, *Wang et al.* does not teach the notion that user defined regions may be analyzed to develop a desired order of individual words in the regions "in accordance with a textual relationship between each of said individual words and in each of said selected regions and a textual relationship between each of the selected regions." (Resp. at 9.)

[11] Examiner's Response regarding claims 1 and 17:

Applicant's arguments with respect to claims 1 and 17 have been considered but are moot in view of the new grounds of rejection.

Conclusion

[12] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-74155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
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